

ABSTRACT

The invention relates to a turbo-machine, in particular to a gas turbine and to a method for accelerating a temperature modification of a rotor shaft rotationally mounted in said turbo-machine. The aim of said invention is to develop a device and a method for the turbo-machine making it possible to reduce the size of a radial split of the turbo-machine in order to obtain greater degree of efficiency. The inventive turbo-machine comprises a rotor rotationally mounted in the case of the turbo-machine, a feeding channel embodied in the rotor for introducing a fluid and an outlet channel embodied in the rotor for removing said fluid. An inlet orifice of the feeding channel is disposed further inside than the outlet orifice of the outlet channel, and means influencing a liquid flow is formed of an actuating device dependent on centrifugal force. Methods for cooling the rotor only by decelerating the gas turbine and for heating the turbo-machine rotor by heating fluid flowing there-through are also disclosed.